

**ATTACHMENTS TO THE
TECHNICAL SPECIFICATIONS**

WASHINGTON STATE FERRIES

M. V. HYAK DRYDOCKING

CONTRACT NO. 00-7037

ATTACHMENTS TO THE TECHNICAL SPECIFICATIONS

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ATTACHMENT 1

WASHINGTON STATE FERRIES

MARINE COATING SPECIFICATION

AND COLOR SCHEME

REVISION NO. 1/03

1. PREPARATION AND APPLICATION

References: These references are applicable only to the extent specified herein.

- A. Visual Standard for Abrasive Blast Cleaned Steel [SSPC-VIS-1-89]
- B. Visual Standard for Power and Hand Tool Cleaned Steel [SSPC-VIS-3]
- C. Steel Structures Painting Manual, Volume 2, Systems and Specifications [Fifth Edition]
- D. Paint Manufacturer's Specification.

Steel Structures Painting Manual, Volume 2: Systems and Specifications [Fifth Edition], Chapter 2, titled Surface Preparation Specifications, shall be used to define the degree of surface preparation as required by the specification.

SSPC-SP 12 /NACE5 Surface Preparation and cleaning of Steel and Other Hard Materials by High-and Ultrahigh-Pressure Water jetting Prior to Recoating. SSPC Publication No.96-05

Visual Standards SSPC-VIS-1-89 and SSPC-VIS-3 form a part of this Contract and will be used to judge the adequacy of the surface preparation.

Surface preparation specified to be SSPC-SP10, "Near-White Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 10 as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP6, "Commercial Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 6, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP7, "Brush-off Blast Cleaning", shall be to SSPC Surface Preparation Specification No. 7, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP3, "Power Tool Cleaning", shall be to SSPC Surface Preparation Specification No. 3, as defined in Chapter 2 of SSPC Volume 2.

- 1 Surface preparation specified to be SSPC-SP11, "Power Tool Cleaning to Bare
2 Metal", shall be to SSPC Surface Preparation Specification No. 11, as defined in
3 Chapter 2 of SSPC Volume 2.
- 4 The WSF Inspector will designate the areas to be surface prepared, painted and the
5 paint color/colors to be used unless otherwise designated in the Specifications.
- 6 The Contractor shall grit blast the areas designated in each area to SSPC-SP6, unless
7 otherwise designated in the Specifications.
- 8 Existing paint coating bordering spot blasted areas shall be feathered to achieve a
9 smooth transition appearance, ensuring that edges are feathered to make a smooth
10 visual appearance to existing coating and that no rough or sharp edges can be seen
11 between existing and newly applied paint.
- 12 Grit blasted surfaces or any prepared surfaces shall have a profile depth of 2 to 4
13 mils.
- 14 Immediately after grit blasting clean affected spaces and surfaces of blasting material
15 and residue
- 16 The blasted areas shall be coated the same day with paint to hold the blast. If the
17 blasted areas cannot be coated before the surface remains exposed overnight, sand
18 sweep to remove rust bloom prior to applying the paint.
- 19 Care must be exercised to see that dust and grit are not imbedded in soft paint in the
20 areas adjacent to the blasting.
- 21 Prior to coating application, ensure that all surfaces are dry and free of foreign matter.
- 22 Surface Preparation and Paint Coating applications are to be in accordance with the
23 Paint Manufacturer's Specifications, using either airless spray or conventional spray
24 equipment. The back sides of angles, edges of structural shapes, and areas that are
25 incapable of being properly covered by using conventional or airless spray equipment
26 shall be hand-brushed to insure that the minimum dry film thickness is obtained.
- 27 Thinning is not normally required or desirable, and shall not be done unless
28 authorized by the WSF Inspector. Solvents used for thinning and cleaning shall be in
29 strict accordance with the coating manufacturer's recommendations, and shall be
30 handled, stored, and disposed of in strict accordance with current laws, rules, or
31 regulations, whether local, State, or Federal, pertaining to toxic and/or hazardous
32 waste.
- 33 Dry Film Thickness (DFT), where specified, is the minimum dry film thickness in
34 mils.
- 35 Where both film thickness and number of coats is specified, both requirements must
36 be fully met.
- 37 Instruments used to measure film thickness shall have been recently calibrated in
38 accordance with SSPC-SP-PA2, and shall be routinely re-calibrated if requested by
39 the WSF Inspector.
40

- 1 Particular attention shall be paid to the temperature and humidity conditions at the
2 time of application.
- 3 Keep surfaces clean and moisture-free during the coating process and during the
4 curing period.
- 5 Prior to the application of any follow-on coat, thoroughly clean and build up any bare
6 or lightly covered spots in the previous coat to the required thickness. Dirt, drips,
7 runs, and sags are to be removed prior to follow-on coating application.
- 8 The finish coat is to completely obscure the undercoat, and be free of surface
9 imperfections such as dirt, drips, runs, sags, dry spray and other imperfections. The
10 finish coat is to have a smooth and glossy appearance when dry, except for areas
11 requiring otherwise, ie Navigation Light screens.
- 12 Where any coating has been damaged by welding, burning, or other causes, repair the
13 damaged area by blasting or power sanding, ensuring that edges are feathered to
14 make a smooth visual appearance to existing coating and that no rough or sharp edges
15 can be seen between existing and newly applied paint; and no sanding swirls or other
16 marks will remain after the final coat is applied.
- 17 During inclement weather, provide surface protection (tarpaulins, plastic sheeting,
18 etc.) for areas being painted. All painting shall be done under conditions of
19 temperature and relative humidity specified by reference (D).
- 20 Clean affected spaces and surfaces of paint over-spray immediately. Care shall be
21 taken to prevent damage to such items.
- 22 Deck coating may be applied by roller or other means recommended by the
23 manufacturer.
- 24 Painting and inspections shall be scheduled for daylight hours only.
- 25 Upon completion of blasting and before inspection of a blasted area, all grit shall be
26 removed from the inspection area by blowing down with air or other means. Upon
27 completion of inspection and acceptance of blasted area by WSF Inspector, and
28 before paint application, all blasting media shall be removed from all surfaces. Decks
29 shall be broom clean.
- 30 The WSF Inspector will inspect all prepared surface areas upon completion of
31 preparation, and before any paint is applied on prepared surfaces. Upon completion
32 of each paint coat, the WSF Inspector will inspect painted area for proper paint
33 application before the next coat is applied. It is the responsibility of the Contractor to
34 ensure that all required inspections are completed before continuing work.
- 35 **NOTE:** It is incumbent upon the Contractor to provide the WSF Inspector with
36 timely notification in order to preclude delays in required inspections.
- 37 Failure to obtain the WSF Inspector's approval, where required, may require re-
38 preparation and coating, wholly at the expense of the Contractor.
39

1 WSF will enlist the services of the paint manufacturer's representative to assist the
2 WSF Inspector in overseeing the preparation of the surfaces and paint application.

3 The WSF Inspector may conduct the following tests:

- 4 1. Surface profile gage readings.
- 5 2. Wet and dry film thickness gage readings.
- 6 3. Holiday inspection, using a high or low voltage holiday detector.
- 7 4. Surface temperature gauge readings.
- 8 5. Dry film thickness gauge readings using a Tooke gauge.
- 9 6. Surface contamination

10 Ensure that prior to beginning superstructure, blasting the edges of the stripe on the
11 curtain plates and the stacks are measured for applying paint to proper location.

12 Remove the WSDOT stack insignia, and reinstall prior to re-delivery of the Vessel
13 when effected by the work Specifications.

14 Carefully mask and protect machinery, ventilation ducts, tank vents, void vents, name
15 plates, identification labels, valve stems, fire hoses, bright work, glass, trim, wiring,
16 light fixtures and other such items and materials which could be damaged by abrasive
17 blasting, dust associated with the process, or other surface preparation techniques, or
18 which could have their function and appearance degraded by blasting or paint over-
19 spray. If removal is required, **Note and Map** the location of all items removed.
20 Upon completion of painting, all items removed shall be re-installed in their original
21 locations.

22 All plastic and brass signs in affected work areas shall be masked or removed, prior
23 to painting or grit blasting, to prevent damage. If removal is required, **Note and Map**
24 the location of signs. Upon completion of final paint coating, all signs removed shall
25 be re-installed in their original location, using new 316 Stainless Steel fasteners
26 where applicable.

27 Fire station boxes, fire ax boxes, fire extinguisher boxes, fire hoses, life ring holders,
28 low-clearance and height signs shall be removed in affected work areas before grit
29 blasting. Upon completion of painting, all items removed shall be painted and re-
30 installed in their original locations.

31 All painted stencils and markings affected by grit blasting or painting shall be re-
32 painted upon completion of final paint coating in their proper color and location.

33 All windows shall be protected from blasting or painting by a protective covering,
34 using plywood or other means determined to be satisfactory by the WSF Inspector.
35 Affected windows shall be hose tested upon completion of paint work. Upon
36 completion of cleaning and painting, all windows affected by the work shall be
37 washed.

- 1 Ventilation fans located outboard in overhead shall be blasted after removing or in
2 place. In either case, the motors shall be protected and steps taken to prevent grit
3 from getting into ducting before grit blasting.
- 4 Decks in area of painting shall be protected in order to prevent paint over-spray. All
5 over-spray shall be removed upon completion of painting.
- 6 Deck drains on all deck levels shall be clear of obstructions and proper operation
7 shall be demonstrated to the WSF Inspector before re-delivery.
- 8 Vessel wood name signs, wood doors, wood benches and wood trim, when affected
9 by the work Specifications, shall be removed, sanded smooth, refinished and/or
10 repainted in the proper colors as required.
- 11 Doors leading to passenger spaces shall be repainted to their proper color as required.
- 12 Care shall be taken when blasting doors to prevent warping of doors.
- 13 Life preserver locker release mechanisms shall be tested upon completion of painting
14 to ensure proper operation when affected by the work Specifications.
- 15 Rescue-boat launching apparatus shall be protected during painting or blasting to
16 prevent blasting media from getting into rollers, etc.
- 17 Piping insulation shall be removed or protected before blasting. If removed or
18 damaged, it shall be renewed using new insulation at the Contractor's expense.
- 19 Vent screens installed in vent bells shall be protected against blasting and painting.
- 20 All valve handles shall be painted in their proper colors.
- 21 Ventilation louvers shall be removed, blasted and painted on both sides, and re-
22 installed. Care shall be taken to ensure that blasting media does not enter vents, and
23 louvers are not damaged during grit blasting. Louvers shall be re-installed in their
24 original location, using new 316 Stainless Steel fasteners where required.
- 25 All protective covering shall be removed upon completion of final paint coating.
- 26 All other work under this Contract shall be coordinated with this paint work to ensure
27 a complete and proper coating system.
- 28 **NOTE:** On certain vessels, an impressed current cathodic hull protection
29 system is installed. When applying coating systems on the hull in way
30 of the anodes, ensure that none of the anodes or the reference cells are
31 damaged or covered over with paint.
- 32 Apply special coatings around the anodes under the anti-fouling
33 coating as required by the manufacturer of the impressed current
34 system as applicable.
35

2. COLOR SCHEME

Pilothouse tops and the top and bottom of visors, and any other structures on the Texas deck having a canopy top with a curved edge (no coaming), are to be **medium green**.

The tops of all other structures not having a canopy top with a curved edge (has a coaming), including the crew's quarters, the stack house, and machinery houses are to be **haze gray**.

Interior curtain plates and machinery casings are to have a **haze gray** dado approx. 39" up from the deck, or follow the height of the first longitudinal below curtain plate window cut-outs.

Car decks and car ramps in areas that are painted are to be **dark gray**.

All other exterior decks are to be haze gray.

All exterior white is to be **ice blue white**.

Stanchions, railings, cap-rails, and both sides of all screens are to be painted **medium green** on the Texas deck/Sun deck, and the Bridge deck.

Railing on the car deck ramps and on the elevator access ramps shall be painted solid **signal yellow**.

All curbing against the curtain plating is to have the vertical surfaces and the first six inches (6") of the horizontal surface painted **signal yellow**. The remainder of the curbing, extending to the curtain plate, is to be **haze gray**.

All curbing against **machinery** casing and all round bumpers are to be solid **signal yellow**.

The exterior curtain plate stripe above the guard is to be **medium green**.

Stacks shall be painted blue ice white with a medium green stripe at the bottom and a **black** stripe at the top.

All fire stations, emergency stations, fire ax boxes etc., are to be **signal red**.

Exterior gutters between decks are to be painted **haze gray**.

Issaquah Class Vessels shall have their masts painted **flat black** from the bottom edge of the Radar platform up the entire height of the mast.

All exhaust stack tubes are to be **flat black** good to 1300 degrees f.

The exterior side of doors is to be painted **blue white**; the exterior side of all machinery casing doors is to be painted **haze gray** unless otherwise specified.

The interior of all shelter decks are to be **blue white** with a **haze gray** dado from the deck up six inches (6"), including the passenger cabin bulkheads.

1 All vessels are to have a six inch (6") **haze gray** dado up from the deck around the
2 exterior passenger cabin, pilothouse and promenade bulkheads.

3 Promenade decks, pickle-fork decks, and Texas decks are to be coated with **haze**
4 **gray** non-skid in traffic areas. No non-skid is to be applied under seating, or within
5 four inches (4") of bulkheads, coamings, or other vertical surfaces.

6 Car deck non-skid walkways are to be painted with **dark gray** non-skid and striped
7 with a four inch (4") **signal yellow** stripe on each outside edge.

8 Car decks are to have **black** and **signal yellow** striping in way of elevator entrances,
9 entry ways to machinery casings, and emergency gear lockers. Car deck hatches to
10 steering gear spaces, emergency escapes, etc., are to be **signal yellow**.

11 A nine inch (9") **gold** stripe shall be painted on the stack six inches (6") above the
12 **medium green** stripe, using One Shot Brand Lettering Enamel 109L-Metallic Gold
13 on vessels built 50 or more years ago.

14 **ALUMINUM SURFACES**

15 Grit blasting material shall be of non-ferrous material and approved by WSF:

16 A. 30 Mesh Garnet

17 B. Aluminum Oxide

18 C. Ilminite

19 D. Other material as authorized by WSF

20 Immediately after surface preparation of new aluminum, remove all surface
21 contaminates, obtain concurrence from WSF's Inspector, and apply the applicable
22 primer to prevent surface oxidation.

23 Under no circumstances leave freshly prepared aluminum overnight without primer.
24 Should freshly prepared aluminum be left un-primed, the Contractor shall remove all
25 traces of contamination and surface oxidation. All re-work shall be wholly at the
26 expense of the Contractor.

27 Application of primer coats later the same day of preparation will only be allowed in
28 an area where the Contractor has exercised humidity control sufficient to prevent the
29 occurrence of any surface oxidation and after the inspection and approval of that area
30 by WSF just prior to coating.

31 Unless otherwise specified, the coating system shall be the products of/or
32 recommended by the INTERNATIONAL Paint Co.
33

1

GALVANIZED AND STAINLESS STEEL

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3

For Galvanized and Stainless Steel paint application, new surfaces will be prepared using SSPC 1, Solvent cleaning to remove “grease” or as required by specification

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Upon the acceptance of the Surface Preparation by the WSF Inspector apply acid etch primer formula 117 or equal at 0.3 mils (DFT). Within twenty-four hour maximum of apply primer, apply a coat of INTERNATIONAL, Intertuf 262 coat at a minimum of 5 mils (DFT) unless otherwise specified.

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Upon the acceptance of the INTERNATIONAL, Intertuf coat by the WSF Inspector, apply a final coat of INTERNATIONAL, Intercare 755 of proper color at 2 mils, (DFT) minimum, to cover, unless otherwise specified.

11

(END)

(FOR ATTACHMENT NO'S. 2-10)

M.V. HYAK DRYDOCKING CONTRACT,

SEE IFB HARD COPY